

Amendments to the Claims

1. (Currently amended) A blood drawing system for drawing blood from a blood vessel of a living being, the system comprising:

a) a first conduit through which blood drawn from a blood vessel can flow, said first conduit having a closure member for selectively closing the first conduit at a closure site thereof;

b) a first collection vessel for receiving blood and having an exteriorly-operable pressure controller for application of negative or positive pressure within said first collection vessel;

c) a hollow-shaft member;

d) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the first collection vessel; and

e) a third conduit having a first end in communication with the first conduit and a second end in communication with the hollow shaft member, ~~whereby closing the first conduit allows liquid transfer from the first collection vessel through the hollow shaft member upon application of positive pressure within the first collection vessel by the pressure controller.~~

wherein when said first conduit is closed by said closure member and positive pressure is applied within the first collection vessel by the pressure controller, liquid is transferred from the first collection vessel through the hollow shaft member.

2. (Previously presented) A blood drawing system as claimed in Claim 1 wherein the closure member of the first conduit is a clamp.

3. (Original) A blood drawing system as claimed in Claim 1 wherein the first collection vessel is a syringe.

4. (Original) A blood drawing system as claimed in Claim 3 wherein the pressure controller is a plunger within said syringe.

5. (Previously presented) A blood drawing system as claimed in Claim 1 wherein the hollow shaft member is a needle.:

6. (Currently amended) A blood drawing system for drawing blood from a blood vessel of a living being, the system comprising:

a) a first conduit through which blood drawn from a blood vessel can flow, said first conduit having a clamp provided thereto for selectively closing the first conduit;

b) a syringe for receiving blood and having an exteriorly-operable plunger for application of negative or positive pressure within the syringe;

c) a hollow needle;

d) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the syringe; and

e) a third conduit having a first end in communication with the first conduit and a second end in communication with the hollow needle, ~~whereby closing the first conduit allows liquid transfer from the syringe through the hollow needle upon application of positive pressure within the syringe by the plunger.;~~

wherein when said first conduit is closed and positive pressure is applied within the syringe by the plunger, liquid is transferred from the syringe through the hollow needle.

7. (Previously presented) A method of drawing blood from a blood vessel of a living being, the method comprising:

a) connecting a blood vessel conduit leading from the blood vessel to a blood drawing system, the system comprising:

l) a first conduit through which blood from the blood vessel conduit can flow, said first conduit having a closure member for selectively closing the first conduit at a closure site thereof;

ii) a first collection vessel for receiving blood and having an exteriorly-operable pressure controller for application of negative or positive pressure within said first collection vessel;

iii) a hollow-shaft member;

iv) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the first collection vessel; and

v) a third conduit having a first end in communication with the first conduit and a second end in communication with the hollow shaft member, whereby closing the first conduit allows liquid transfer from the first collection vessel through the hollow shaft member upon application of positive pressure within the first collection vessel by the pressure controller;

b) connecting a second collection vessel having a negative pressure therein in fluid communication with the hollow shaft member;

c) operating the pressure controller to effect a negative pressure within the first collection vessel for drawing blood from the first conduit through the second conduit into the first collection vessel;

d) closing the first conduit at the closure site thereof;

e) operating the pressure controller to effect a positive pressure within the first collection vessel for forcing blood from the first collection vessel through the second conduit into the first conduit to the closure site thereof and thereafter into the third conduit and delivery into the second collection vessel; and

f) removing the second collection vessel from the system.

8. (Previously presented) A method of drawing blood as claimed in Claim 7 wherein in the blood drawing system the closure member of the first conduit is a clamp.

9. (Original) A method of drawing blood as claimed in Claim 7 wherein in the blood drawing system the first collection vessel is a syringe.

10. (Original) A method of drawing blood as claimed in Claim 9 wherein in the blood drawing system the pressure controller is a plunger within said syringe.

11. (Original) A method of drawing blood as claimed in Claim 7 wherein the second collection vessel is a vacuum tube with a needle-penetrable stopper closing a single entrance to said vacuum tube.

12. (Previously presented) A method of drawing blood from a blood vessel of a living being, the method comprising:

a) connecting a blood vessel conduit leading from the blood vessel to a blood drawing system, the system comprising:

i) a first conduit through which blood from the blood vessel conduit can flow, said first conduit having a clamp for selectively closing the first conduit at a closure site thereof;

ii) a syringe for receiving blood and having an exteriorly-operable plunger for application of negative or positive pressure within the syringe;

iii) a hollow needle;

iv) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the syringe; and

v) a third conduit having a first end in communication with the first conduit and a second end in communication with the needle, whereby closing the first conduit allows liquid transfer from the syringe through the needle upon application of positive pressure within the syringe by the plunger;

b) connecting a vacuum tube in fluid communication with the needle;

c) operating the plunger to effect a negative pressure within the syringe for drawing blood from the first conduit through the second conduit into the syringe;

d) closing the first conduit at the closure site thereof;

e) operating the plunger to effect a positive pressure within the syringe for forcing blood from the syringe through the second conduit into the first conduit to the

closure site thereof and thereafter into the third conduit and delivery into the vacuum tube; and

- f) removing the vacuum tube from the system.

13. (Previously presented) An intravenous system for delivering a medicament liquid to a blood vessel and for collecting blood from the blood vessel through the system and substantially free of said medicament liquid, the system comprising:

- a) a vascular first conduit having a first end thereof for liquid communication with a storage container storing the medicament liquid and a second end thereof for liquid communication with the blood vessel;
- b) a first collection vessel for receiving blood and having an exteriorly-operable pressure controller for application of negative or positive pressure within said first collection vessel;
- c) a hollow shaft member;
- d) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the first collection vessel, said second conduit having a closure member for selectively closing the second conduit; and
- e) a third conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the hollow shaft member, said third conduit having a closure member for selectively closing the third conduit, whereby closing the third conduit, opening the second conduit, and applying negative pressure to the first collection vessel collects in said first collection vessel at least substantially all medicament liquid within the first conduit, and thereafter closing the second conduit and opening the third conduit directs substantially medicament liquid-free blood within the first conduit as present from the blood vessel.

14. (Previously presented) An intravenous system for delivering a medicament liquid to a blood vessel as claimed in Claim 13 wherein each closure member is a clamp.

15. (Original) An intravenous system for delivering a medicament liquid to a blood vessel as claimed in Claim 13 wherein the first collection vessel is a syringe.

16. (Original) An intravenous system for delivering a medicament liquid to a blood vessel as claimed in Claim 15 wherein the pressure controller is a plunger within said syringe.

17. (Original) An intravenous system for delivering a medicament liquid to a blood vessel as claimed in Claim 15 wherein the hollow shaft member is a needle.

18. (Original) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit from a blood vessel of a living being, the method comprising:

a) connecting the blood vessel conduit leading from the blood vessel to a blood drawing system, the system comprising:

i) a vascular first conduit having a first end thereof for liquid communication with a storage container for storing the medicament liquid and a second end thereof for liquid communication with the blood vessel;

ii) a first collection vessel for receiving at least medicament liquid and having an exteriorly-operable pressure controller for application of negative or positive pressure within said first collection vessel;

iii) a hollow shaft member;

iv) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the first collection vessel, said second conduit having a closure member for selectively closing the second conduit; and

v) a third conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the hollow shaft member, said third conduit having a closure member for selectively closing the third conduit, whereby closing the third conduit, opening the second conduit, and applying negative

pressure to the first collection vessel collects in said first collection vessel at least substantially all medicament liquid within the first conduit, and thereafter closing the second conduit and opening the third conduit directs substantially medicament liquid-free blood within the first conduit as present from the blood vessel;

b) connecting a second collection vessel having a negative pressure therein in fluid communication with the hollow shaft member;

c) closing the closure member of the third conduit, opening the closure member of the second conduit, and operating the pressure controller and creating a negative pressure within the first collection vessel for drawing at least medicament liquid from the first conduit through the second conduit into the first collection vessel;

d) closing the closure member of the second conduit, opening the closure member of the third conduit, and collecting substantially medicament liquid-free blood from within the first conduit as present from the blood vessel into the second collection vessel; and

e) closing the closure member of the third conduit and removing the second collection vessel from the system.

19. (Previously presented) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit as claimed in Claim 18 wherein in the blood drawing system each closure member is a clamp.

20. (Original) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit as claimed in Claim 18 wherein in the blood drawing system the first collection vessel is a syringe.

21. (Original) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit as claimed in Claim 20 wherein in the blood drawing system pressure controller is a plunger within said syringe.

22. (Original) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit as claimed in Claim 18 wherein the second collection vessel is a vacuum tube with a needle-penetrable stopper closing a single entrance to said vacuum tube.

23. (Original) A method of drawing blood through an intravenous medicament liquid-delivery blood vessel conduit from a blood vessel of a living being, the method comprising:

a) connecting the blood vessel conduit leading from the blood vessel to a blood drawing system, the system comprising:

i) a vascular first conduit having a first end thereof for liquid communication with a storage container for storing the medicament liquid and a second end thereof for liquid communication with the blood vessel;

ii) a syringe for receiving at least medicament liquid and having an exteriorly operable plunger for application of negative or positive pressure within said first collection vessel;

iii) a hollow needle;

iv) a second conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the syringe, said second conduit having a clamp for selectively closing the second conduit; and

v) a third conduit having a first end in fluid communication with the first conduit and a second end in fluid communication with the hollow needle, said third conduit having a closure member for selectively closing the third conduit, whereby closing the third conduit, opening the second conduit, and applying negative pressure to the syringe collects in said syringe at least substantially all medicament liquid within the first conduit, and thereafter closing the second conduit and opening the third conduit directs substantially medicament liquid-free blood within the first conduit as present from the blood vessel;

b) connecting a vacuum tube in fluid communication with the needle;

c) closing the closure member of the third conduit, opening the closure member of the second conduit, and operating the plunger and creating a negative pressure within the syringe for drawing at least medicament liquid from the first conduit through the second conduit into the syringe;

d) closing the closure member of the second conduit, opening the closure member of the- third conduit, and collecting substantially medicament liquid-free blood from within the first conduit as present from the blood vessel into the vacuum tube; and

e) closing the closure member of the third conduit and removing the vacuum tube from the system.

24. (Previously presented) Apparatus comprising:

at least a first conduit for establishing a first fluid path between a blood vessel of a patient and a first fluid collection vessel whereinto a positive pressure or a negative pressure may be applied;

at least a second conduit for establishing a second fluid path between said first fluid collection vessel and a needle; and

a closure member associated with said first conduit effective for selectively opening or closing said first fluid path;

wherein when said closure member is operated to open said first fluid path and a negative pressure is applied within said first fluid collection vessel, fluid from the patient flows through said first fluid path and is collected in said first fluid collection vessel; and

wherein when said closure member is operated to close said first fluid path and a positive pressure is applied within said first fluid collection vessel, said second fluid path is operable to allow fluid stored in said first fluid collection vessel to flow through said second fluid path to said needle and be collected in a second fluid collection vessel mated to said needle.

25. (Previously presented) Apparatus of claim 24, wherein said first fluid collection vessel is a syringe and said fluid collection vessel is a vacuum tube, said needle being a part of a vacuum tube holder to which said vacuum tube is inserted.

26. (Previously presented) A fluid routing apparatus, comprising:

- a first conduit having a first end connectable to a patient and a second end connected to a conduit connector;
- a second conduit having a first end connectable to a syringe and a second end connected to said conduit connector;
- a third conduit having a needle at its first end and a second end connected to said conduit connector;
- a closure member associated with said first conduit effective for selectively opening or closing said first fluid path;

wherein when said closure member is operated to open said first conduit, at least a first fluid path is established between said first conduit and said second conduit for flow of fluid between the patient and the syringe; and

wherein when said closure member is operated to close said first conduit, at least a second fluid path is established between said syringe and said needle.

27. (Previously presented) Apparatus of claim 26, wherein said first end of said first conduit is mated to a luer connector to which a needle may be connected for insertion to a vein of the patient; and

wherein the first end of said third conduit has a luer connector to which a vacuum tube holder is mated.

28. (Previously presented) Apparatus comprising:

- at least a first conduit for establishing a first fluid path between a patient and a syringe whereinto a positive pressure or a negative pressure may be applied;
- at least a second conduit for establishing a second fluid path between said syringe and a needle;
- at least a third conduit for establishing a third fluid path between the patient and a fluid store;
- a first closure member associated with said first fluid path effective for selectively opening or closing said first fluid path; and

a second closure member associated with at least said second fluid path for selectively opening or closing said second fluid path;

wherein when said first closure member is operated to open said first fluid path and said second closure member is operated to close said second fluid path, and a negative pressure is applied within said syringe, fluid in said first fluid path is collected in said syringe.

29. (Previously presented) Apparatus of claim 28, wherein when said first closure member is operated to close said first fluid path and said second closure member is operated to open said second fluid path, said second fluid path is operable to allow either the fluid stored in said fluid store to flow to the patient or fluid from the patient to be drawn to said needle if a vacuum tube is mated to said needle and fluid is not being provided to the patient from said fluid store; and

wherein the fluid stored in said syringe may be injected to said first fluid path when said first closure member is operated to open said first fluid path and said second closure member is operated to close said second fluid path, and a positive pressure is applied within said syringe.

30. (Previously presented) A fluid routing apparatus, comprising:

a first conduit having a first end connectable to a patient and a second end connected to a first conduit connector;

a second conduit having a first end connectable to a syringe and a second end connected to said first conduit connector, said first and second conduits effective to establish a first fluid path;

a third conduit having a first end connected to said first conduit connector and a second end connected to a second conduit connector;

a fourth conduit having a first end connected to a needle and a second end connected to said second conduit connector, said first, third and fourth conduits effective to establish a second fluid path;

a fifth conduit having a first end connectable to a fluid store and a second end connected to said second conduit connector, said first, third and fifth conduits effective to establish a third fluid path;

a first closure member associated with said first fluid path effective for selectively opening or closing said first fluid path; and

a second closure member associated with said second fluid path effective for selectively opening or closing said second and third fluid paths;

wherein when said first closure member is operated to open said first fluid path and said second closure member is operated to close said second and third fluid paths, fluid communication is established between the patient and the syringe; and

wherein when said closure member is operated to close said first fluid path and said second closure member is operated to open said second and third fluid paths, fluid communication is established between the patient and at least one of said needle and fluid store.